

10/697,509ERICP0326USBREMARKS

Following entry of the above amendment, claims 2-5, 7, 8, 26-30, 32-39, and 56-68 will be pending. Claims 1, 6, 9-25, and 40-55 have been canceled. Claim 26 has been re-written in independent form; has been amended to clarify its distinction over the prior art; has been amended to broaden the scope of the claim by, among other things, changing "the jaw elements" to "one or more of the jaw elements," and by removing the phrase "physically coupled together" (previously in canceled claim 1); has been amended to clean up the language; and has been amended to correct a misspelled word. Claims 27-29 have been amended without intended change in scope to clean up the language. Claim 30 has been re-written in independent form, with its scope broadened by adding "at least one of" before "the jaw elements." Claim 30 has also had its language cleaned up somewhat along the lines of claim 26. Claims 32 and 35 have been re-written in independent form, with their scope broadened by removing the phrase "physically coupled together" (previously in canceled claim 1). Claims 2-4, 37, and 39 have been amended to avoid dependence on canceled claims. Claims 56-68 have been added.

Double Patenting

Claims 2-4, 7, and 39 stand rejected on under the doctrine of obviousness-type double patenting over claims 1-5 of U.S. Patent No. 6,719,478. The rejections have been rendered moot by amending claims 2-4, 7, and 39 to depend upon claim 26, which is not rejected under the doctrine of obviousness-type double patenting. Withdrawal of the rejections is therefore requested.

Claim Objection

Claim 26 stands objected to because of a misspelled word. The claim has been amended to correct the misspelling, thereby removing the basis for the objection.

10/697,509ERICP0326USBIndefiniteness Rejections

Claims 2-5, 7, 8, 26-30, and 32-39 stand rejected under 35 USC 112, second paragraph, as indefinite due to an inconsistency in referring to both singular and plural jaw element sections in canceled claim 1. The inconsistency has been avoided in the re-writing of claims 26, 30, 32, and 35 in independent form. Withdrawal of the rejections is therefore respectfully requested.

Prior Art Rejections

The prior art rejections are addressed below roughly in the order raised in the Action.

Wu

Claims 2-5 and 39 stand rejected under 35 USC 102(b) as anticipated by Wu, U.S. Patent No. 5,193,932 ("Wu"). Claims 7, 8, 37, and 38 stand rejected under 35 USC 103(a) as obvious over Wu. All of these claims have been amended to depend upon claim 26, which is not rejected over Wu. Thus the rejections are rendered moot, and their withdrawal is respectfully requested.

Combination of Cherry and Werner

Claims 3-5, 8, 26-29, 32-36, and 39 stand rejected under 35 USC 103(a) as obvious over Cherry et al., U.S. Patent No. 4,508,409 ("Cherry"), in view of Werner, U.S. Patent No. 4,408,926 ("Werner"). Withdrawal of the rejections is respectfully requested for at least the following reasons.

Cherry discloses a pair of embodiments of wire splicing device 10 and 12 for splicing insulated electrical wires or cables. The first embodiment wire splicing device 10, shown in Figs. 1-4 of Cherry, includes a pair of tapered shells 14 having an inner surface with circumferential insulation-piercing teeth 56. The jaw sections 14 are placed around a pair of electrical cables 20 to be joined, and are physically held in

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place by an elastic retaining ring 16. Tapered collars 18 are then pressed onto the tapered shells 14 to drive the insulation-piercing teeth 56 inward to engage the ends of the cable 20. Cherry discloses that the tapered collars 18 may have a two-piece construction, with an outer insulating cover 40 and an inner member 42 of relatively rigid material, such as aluminum. Col. 2, lines 42-44.

Cherry's second embodiment, the wire splicing device 12 (Figs. 5-7), involves insulation-piercing pins 70 slidably mounted in openings 72 in the tapered shells 14. (Though the pins 70 are unaccountably referred to in parts of Cherry as "teeth," col. 3, line 42 - col. 4, line 3, they are more accurately referred to in other parts of Cherry as "pins," col. 1, lines 51-54.) The pins 70 are received within tapered axial grooves 74 in the tapered collars 18. As the collars 18 are axially driven onto the shells 14, the pins 70 are driven inward, piercing the insulating jacket of the cable, and making electrical contact with conductors 22 of the cable.

Cherry does not disclose a reinforcing bar splice. Also, Cherry does not disclose a jaw element with teeth, radially inward of a tapered shell. Further, Cherry does not disclose a jaw element with a parallelepiped shape, and does not disclose tapered collars with either carbon wound thread or with an outer sleeve portion having greater tensile strength than an inner sleeve portion.

Werner discloses an axial crimp connection device 12 for joining two cylindrical objects 70. The connection device 12 includes jaw segments 10 with tapered outer surfaces and teeth 26 on their inner surfaces. The jaw segments 10 are pressed radially inward against the objects 70 by tapered collars 66. Werner discloses that the cylindrical objects 70 can be "electrical wires, cables, reinforcing rods, tubing and so forth." Col. 3, lines 1-5. Werner is relied on in the Action for suggestion of modifying Cherry's wire splicing device for use as a reinforcing bar splice.

Claim 26 as amended recites a reinforcing bar splice that includes, *inter alia*, multi-part jaw element sections each including, as separate pieces, a tapered shell with a tapered outer surface and at least one jaw element, as well as including tapered

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collars that engage the tapered outer surfaces to force the jaw elements inward. Claim 26 is patentable over Cherry and Werner because neither reference teaches or suggests tapered collars that engage tapered outer surfaces of tapered shells to drive jaw elements inward. Cherry's first embodiment wire splicing device 10 does not teach or suggest these features because it does not involve separate tapered shells and jaw elements, but rather involves single-piece tapered shells 14 that are driven inward by the tapered collars 18. (Likewise, Werner's single-piece jaw segments 66 are engaged and driven inward by tapered collars 66.) Cherry's second embodiment wire splicing device 12 does not teach or suggest these features because the pins 70 are directly engaged by the tapered collars 18, and are not driven inward by the tapered shells 14, which are taken as corresponding to the tapered shells recited in claim 26 as amended. Since none of the embodiments in the cited references teaches or suggests tapered collars that engage tapered outer surfaces of tapered shells to drive jaw elements inward, claims 3-5, 8, 26-29, and 39 are patentable over Cherry and Werner, either alone or in combination.

In addition, dependent claim 4 recites that the jaw elements have teeth. Cherry's second embodiment wire splicing device 12 has pins 70 rather than teeth, despite some misuse of language in Cherry's specification. In no way can the individual pins 70, each with a single sharp point, be considered to have plural "teeth." Thus, to the extent that Cherry's second embodiment wire splicing device 12 is being relied upon to reject the claims, for another reason claims 4, 5, 7, and 8 are patentable over Cherry and Werner, either alone or in combination.

Claim 32 recites a reinforcing bar splice that includes, among other things, tapered collars that each include an inner sleeve portion and an outer sleeve portion made of different materials, wherein the material of the outer sleeve portion has a greater tensile strength than the material of the inner sleeve portion. Neither reference teaches or suggests such tapered collars. As noted above, Cherry does disclose that its tapered collars 18 may have a two-piece construction, with an outer insulating cover

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40 and an inner member 42 of relatively rigid material, such as aluminum. Col. 2, lines 42-44. However, the material of Cherry's insulating material cover 40, probably plastic or rubber, does not have a greater tensile strength than the aluminum material of the inner member 42. And Cherry does not suggest modifying the tapered collars 18 to provide the cover with a greater tensile strength than the inner member, at least because Cherry provides no reason for doing so. Cherry states that the purpose of the two-material tapered collars 18 is to insulate the outer and side surfaces of the inner member 42, while leaving an inner surface 48 bare so as to provide metal-to-metal contact with the shells 14. Col. 4, lines 48-51. Cherry's insulating material cover 40 is thin, and is only there to provide insulation. Nothing in Cherry suggests using the insulating material cover 40 for anything besides insulation, such as for a function that would require a high-strength material, and nothing in Cherry suggests using a high tensile strength material for the insulating material cover. Werner does not teach or suggest what Cherry lacks in this regard. Thus Cherry and Werner do not teach or suggest the recited features of claim 32, and claims 32-34 are therefore patentable over Cherry and Werner, either alone or combination.

Dependent claims 33 and 34 are patentable over Cherry and Werner for the additional reasons that neither reference teaches or suggests tapered collars with carbon fibers (claim 33), or where the carbon fibers are carbon threads (claim 34).

Claim 35 recites a reinforcing bar splice that includes, *inter alia*, tapered collars that include carbon thread. Claim 35 is patentable over Cherry for at least the reasons given above with regard to claims 32-34.

Combination of Cherry, Werner, and Clark

Claim 2 stands rejected under 35 USC 103(a) as obvious over Cherry in view of Werner, further in view of Clark, U.S. Patent No. 1,337,642 ("Clark"). Clark fails to teach or suggest what Cherry and Werner fail to teach or suggest with regard to claim

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26. Thus claim 2 is patentable over Cherry, Werner, and Clark, either alone or in combination.

Combination of Cherry, Werner, and Davis

Claim 7 stands rejected under 35 USC 103(a) as obvious over Cherry in view of Werner, further in view of Davis, U.S. Patent No. 2,652,273 ("Davis"). Davis fails to teach or suggest what Cherry and Werner fail to teach or suggest with regard to claims 4 and 26. Thus claim 7 is patentable over Cherry, Werner, and Davis, either alone or in combination.

Combination of Cherry, Werner, and Trovillion

Claim 30 stands rejected under 35 USC 103(a) as obvious over Cherry in view of Werner, further in view of Trovillion, U.S. Patent No. 373,789 ("Trovillion"). Withdrawal of the rejection is respectfully requested for at least the following reasons.

Trovillion discloses a clamping device for wires, for use in the construction of wire fences. Page 1, lines 27-30. Trovillion's device includes a block A with a wedge-shaped recess B. A sliding wedge block I fits into the recess B. One side of the recess B has a steel clamping plate D, with serrations E. Opposed to the clamping plate D is a steel clamping plate K, having serrations L, along a surface of the wedge block I. In use, a wire for a wire fence is gripped between the serrated plates D and K, to provide a secure grip while stretching the wire between a pair of posts. Page 1, line 97 - page 2, line 15. Trovillion does not disclose any sort of splicing device, and does not disclose any sort of radial gripping motion.

Claim 30 recites a reinforcing bar splice that includes, *inter alia*, at least two jaw sections that are multi-part jaw sections that each include a tapered shell, and at least one of the jaw elements radially inward of the tapered shell, wherein the jaw elements are parallelepiped-shape jaw elements. As described above with regard to claim 26, Cherry and Warner do not teach or suggest use of multi-part jaw sections with each of

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the jaw sections including at least one jaw element radially inward of a tapered shell. Trovillion does not make up for the failure of Cherry and Warner to teach or suggest this. For this reason alone claim 30 is patentable over Cherry, Warner, and Trovillion, either alone or in combination.

In addition, it would not have been obvious to modify Cherry's wire splicing device to include Trovillion's clamping plate K. The reason given in the Action for the proposed modification is "to facilitate replacement when worn," Action, page 7 (citing page 1, lines 63-75 of Trovillion). Concern about wear is reasonable in the context of Trovillion's device, which is used over and over again to grip wires during the construction of wire fences. There is no need for concern about wear in a wire splicing device. Wire splicing devices are generally single-use devices - once the wires are spliced together, they generally stay spliced together. It may be possible for the splice to fail and get pulled apart, but no part of a wire splice is a wear part.

Wear is, if anything, even less of a concern in a reinforcing bar splice. Reinforcing bars are spliced together during building construction. The splices are generally permanent, and are often encased in concrete. Reinforcing bar splices are designed to be used once, and to hold fast when used. They are not re-used. Wear through use and re-use is simply not a valid concern in the context of reinforcing bar splices.

Apart from the lack of motivation for the proposed combination, it also shows a lack of practicality. Although it is not stated in the Action, presumably a modification of Cherry's first embodiment 10 is suggested. Cherry's tapered shells 14 have concave inner surfaces 28 with curvature in a direction transverse to a longitudinal axis. Col. 2, lines 18-20. There are no flat surfaces on the inner surfaces 28 that would be suitable for replacement with parallelepiped shape plates. No suggestion is provided in any of the cited references (Cherry, Warner, and Trovillion) as to how or why such a substitution would be suggested.

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Thus for many reasons there is no motivation for the proposed combination, and again claim 30 is patentable over Cherry, Warner, and Trovillion.

Conclusion

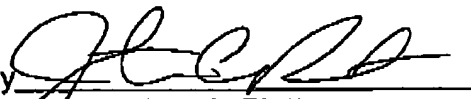
For at least the foregoing reasons withdrawal of the rejections and objections is requested, in which case the application would be in condition for allowance. Early action to that effect is requested. Should the Examiner believe that a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

No fee is believed due with the filing of this paper. In the event any fees are due in connection with the filing of this paper, the Commissioner is authorized to charge those fees to our Deposit Account No. 18-0988 (Charge No. ERICP326USB).

Respectfully submitted,

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